

Drug Challenges: Indications, Procedures, Risk, and Safety Outcomes

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Summary Statement #145

To exclude the rare possibility of an IgE-mediated reaction to **local anesthetics**, skin testing and graded challenge can be performed in patients who present with a reaction history suggestive of possible IgE-mediated allergy to these drugs. (B)



Local Anesthetic Challenges

- Prick test with undiluted local anesthetic (LA)
- Subcutaneous challenge every 20 minutes with:
 - 0.1 ml 1:100th (1%)
 - 0.1 ml 1:10 (10%)
 - 0.1, 0.25, 0.5, 1.0 ml Full strength
- 236 patients evaluated by this method with all negative challenges
- Recommend testing with preservatives



Local Anesthetic Challenges

- Prick test with undiluted local anesthetic (LA)
- Intradermal test with 0.04 ml of 1:100 dilution of LA
- Subcutaneous challenge with 1.0 ml saline
- If placebo challenge negative after 20 min., 1.0 ml undiluted LA subcutaneous injection



Local Anesthetic Challenges

- 287 patients evaluated by this method
 - 3 positive skin tests (all tolerated pure lidocaine)
 - 9% reported subjective symptoms
 - Lightheadedness, anxiety, headache, pruritus etc.
 - No objective signs of adverse reaction occurred in any patient after challenge
- Recommend if positive skin test, repeat and if still positive, challenge with pure lidocaine and avoid methylparabens

How to safely do drug challenges in the office: A practical approach

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How to safely do drug challenges in the office: A practical approach

■ Local anesthetic challenge

- Use lidocaine 1% with methylparaben
- Puncture then intradermal skin test
 - A rare individual will be allergic to methylparaben and will be skin test positive
- Challenge with 1 cc saline
- Challenge with 1 cc lidocaine 1% with methylparaben
- Challenge with other specific local anesthetics if desired, but very low chance of true positive
- Expect agitation in some individuals with epinephrine containing products.